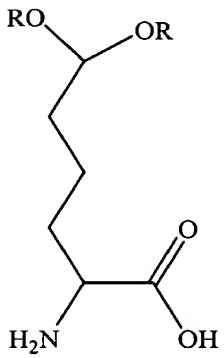
IN THE CLAIMS

A listing of currently pending claims follows:

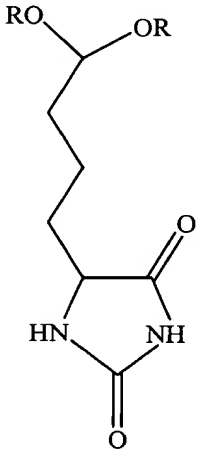
Claim 1 (Previously Presented): A process for the preparation of allysine acetal of the general formula (I)



(I)

comprising:

contacting a hydantoin of the general formula (II):



(II)

wherein in formulae (I) and (II) R represents (C_1-C_8)-alkyl, (C_2-C_4)-alkylene, (C_6-C_{18})-aryl, (C_7-C_{19})- aralkyl, or (C_1-C_8)-acyl,

with a hydantoinase and a D- or L-specific carbamoylase in the presence of at least one hydantoin racemase,

under conditions suitable for *in situ* racemisation of the hydantoin or of an N-carbamoyl amino acid.

Claim 2 (Previously Presented): The process of Claim 1, wherein at least one of the hydantoinase, a D- or L-specific carbamoylase, or the at least one racemase is in at least one form selected from the group consisting of free form, immobilized form, cell fraction form, cell extract form, and in a form enclosed in a cell.

Claim 3 (Original): The process of Claim 1, wherein the *in situ* racemization is spontaneous, enzyme-catalyzed, or both.

Claim 4 (Previously Presented): The process according to Claim 1,

wherein the hydantoin racemase, the hydantoinase, and the L- or D- specific carbamoylase are present in a total cell catalyst.

Claim 5 (Previously Presented): The process according to Claim 4,

wherein the total cell catalyst comprises an L-specific carbamoylase.

Claim 6 (Original): The process according to Claim 4, wherein said total cell catalyst comprises L-specific carbamoylase.

Claim 7 (Previously Presented): The process according to Claim 6, wherein the recombinant bacterium is *Escherichia coli.*

Claim 8 (Previously presented): The process according to Claim 1

wherein

the contacting is carried out in an enzyme-membrane reactor.

Claim 9 (Canceled).

Claim 10 (Previously Presented): The process according to Claim 1, wherein the contacting is performed in the presence of a metal salt.

Claim 11 (Canceled).

Claim 12 (Previously Presented): The process of Claim 4, further comprising developing the total cell catalyst from at least one cell that comprises at least one cloned gene coding for at least one member selected from the group consisting of a hydantoin racemase, hydantoinase, L-specific carbamoylase, and D-specific carbamoylase.

Claim 13 (Previously Presented): The process of Claim 4, wherein the total cell catalyst is at least one member selected from the group consisting of *Escherichia coli* JM109, *Escherichia coli* NM 522, *Escherichia coli* JM105, *Escherichia coli* RR1, *Escherichia coli* DH5 , *Escherichia coli* TOP 10', and *Escherichia coli* HB101.

Claim 14 (Previously Presented): A method for producing a pharmaceutical or a biologically active product, comprising contacting the allysine acetal of the general formula (I) produced by the process of Claim 1 with a pharmaceutically-acceptable or a biologically-acceptable ingredient, excipient, or carrier.

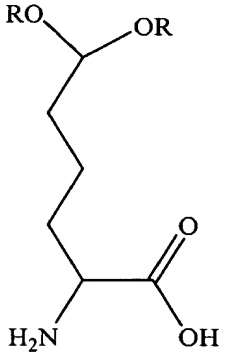
Claim 15 (Previously Presented): The process of Claim 1, wherein the contacting is performed so that the allysine acetal of the general formula (I) is produced at an optical purity of at least 90%.

Claim 16 (Previously Presented): The process of Claim 1, wherein the contacting is performed so that the allysine acetal of the general formula (I) is produced at a yield of at least 85%.

Claim 17 (Previously Presented): The process according to Claim 1, wherein the contacting is performed at a pH of from 5.5 to 8.5.

Claim 18 (Previously Presented): The process according to Claim 1, wherein the contacting is performed at a temperature of from 20 to 40 °C.

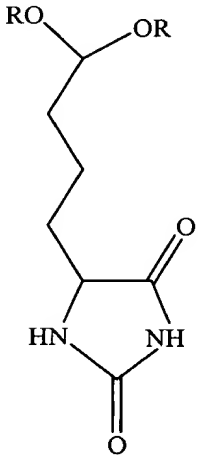
Claim 19 (Previously Presented): A process for the preparation of allysine acetal of the general formula (I)



(I)

comprising:

contacting a hydantoin of the general formula (II):



(II)

wherein in formulae (I) and (II) R represents (C_1-C_8)-alkyl, (C_2-C_4)-alkylene, (C_6-C_{18})-aryl, (C_7-C_{19})- aralkyl, or (C_1-C_8)-acyl,

with a hydantoinase;

contacting the hydantoin with a D- or L-specific carbamoylase; and

contacting the hydantoin with at least one hydantoin racemase,

wherein the contacting is performed under conditions suitable for *in situ* racemisation of the hydantoin or of an N-carbamoyl amino acid.

Claim 20 (Previously Presented): The process according to Claim 19, wherein the contacting of the hydantoin with the hydantoinase, D- or L-specific carbamoylase, and the at least one racemase are performed sequentially or continuously.

BASIS FOR THE AMENDMENT

The specification has been amended to include that information relevant to JM109 (pOM22, pOM21) incorporated by reference in the present specification on page 5, lines 12-13. The sequence listing has been replaced with a substitute sequence listing. The substitute sequence listing provides the sequence listing as originally filed and those sequence listing disclosed in U.S. 6,524,807 which was incorporated by reference in the specification as originally filed. Since this information was incorporated by reference in the specification as originally filed its inclusion in the present specification by amendment does not represent new matter. Support for the amendment is found in U.S. 6,524,807 (column 3, line 13 – column 11, line 64) which claims priority to U.S. 60/157,427 and which is incorporated by reference in the present specification on page 5, lines 8-15. The text may also be found on page 4, line 5 – page 15, line 9 of U.S. 60/157,427. Applicants submit the amendment to the specification does not add any new matter.